

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims, in the application:

Listing of Claims:

1. (currently amended) A device for closing containers having an opening with a rim, the device comprising:
a rigid capsule ~~(3)~~ having a cup shape with a closed bottom and an open end, and
an extensible diaphragm ~~(2)~~ subtended in a plane situated between ~~the closed bottom and~~
the open end of the capsule ~~(3)~~ and an intermediate position between the open end and the closed
bottom of the capsule,
wherein the diaphragm has an outer portion wider than an inner diameter of the capsule,
the outer portion being coupled to a perimeter of the open end of the capsule or to an inner
longitudinal wall of the capsule, and
wherein the diaphragm is ~~stretched and caused~~ stretchable to tightly adhere against the rim
of the opening when the capsule and the rim of the opening are mated, ~~and~~
~~wherein the capsule cooperates with the rim of the opening of the container (1).~~
2. (currently amended) The device as claimed in claim 1, wherein the outer portion
of the diaphragm is permanently secured to the rigid capsule ~~(3)~~ coupled to the perimeter of the
open end of the capsule or to the inner longitudinal wall of the capsule by adhesive bonding, or
by a chemical or physical attachment process.
3. (currently amended) The device as claimed in claim 1, wherein the ~~diaphragm~~
~~(2) is secured to the rigid capsule (3) by attaching it to the edge of the open end of the capsule~~
~~(3)~~ outer portion of the diaphragm is coupled to a perimeter of the open end of the capsule.
4. (currently amended) The device as claimed in claim 3, wherein the open end of
the capsule ~~(3)~~ ~~further~~ comprises a flange extending outwardly from the open end, and wherein

~~the outer portion of the diaphragm is coupled to the flange providing for a wider surface of adhesion for the diaphragm (2).~~

5. (withdrawn) The device as claimed in claim 1, wherein the diaphragm (2) extends beyond the open end of the capsule (3) to form an annular peripheral surface, which is attached to a portion of the outer wall of the capsule (3).

6. (withdrawn) The device as claimed in claim 5, wherein the annular peripheral surface of the diaphragm (2) is retained in position against the outer wall of the capsule (3) by the elastic properties of the diaphragm (2).

7. (withdrawn) The device as claimed in claim 5, further comprising a bushing having open opposite ends, wherein the bushing has an inner diameter substantially equal to the outer diameter of the capsule (3), wherein the capsule (3) is partially inserted within the bushing and wherein the annular peripheral surface of the diaphragm (2) is compressed against the outer surface of the capsule (3).

8. (withdrawn) The device as claimed in claim 7, wherein the bushing has an outer diameter substantially equal to the inner diameter of the capsule (3), and wherein the bushing penetrates the open end of the capsule (3) for a certain axial depth and compresses the annular peripheral surface of the diaphragm (2) against the inner surface of the capsule (3).

9. (withdrawn) The device as claimed in claim 7, wherein the annular peripheral surface may be further affixed to the capsule (3) by a secondary fastening process, and wherein the secondary fastening process is subsequent welding or simultaneous gluing.

10. (withdrawn) The device as claimed in claim 7, wherein the bushing comprises a lead-in surface providing a rounded tapering at the point of insertion of the capsule (3).

11. (withdrawn) The device as claimed in claim 7, wherein the diaphragm (2) is positioned in the inner portion of the assembly of the rigid cup-shaped element (3) and the bushing.

12. (withdrawn) The device as claimed in claim 7, wherein the bushing (11) and the capsule (3) are connected by coupling radial ridges and radial recesses.

13. (currently amended) The device as claimed in claim 1, wherein the diaphragm is cup-shaped, ~~and has a cylindrical wall designed to come in contact with the inner surface of the capsule (3)~~ wherein the outer portion is cylindrically shaped and is coupled to the inner longitudinal wall of the capsule, said and wherein the capsule (3) being axially deeper than the diaphragm.

14. (withdrawn) The device as claimed in claim 13, wherein the diaphragm has a peripheral rim.

15. (withdrawn) The device as claimed in claim 13, wherein the free edge of the diaphragm has an annular widened portion (85) extending from the its free edge, the annular widened portion being at least as wide as the outside diameter of the open end of the capsule (3).

16. (withdrawn) The device as claimed in claim 15, wherein the capsule (3) further comprises an annular seat (84) extending from the open end and housing the annular widened portion (85) of the diaphragm.

17. (currently amended) The device as claimed in claim 1, wherein the capsule (3) is made of a resilient material, and wherein the resilient material is plastic, metal, or a combination thereof.

18. (currently amended) The device as claimed in claim 1, further comprising a sealing element (4) interposed between the diaphragm (2) and the closed bottom.

19. (currently amended) The device as claimed in claim 18, wherein the sealing element is pre-fitted in ~~the~~an inner side of the closed bottom of the capsule~~(3)~~.

20. (withdrawn) The device as claimed in claim 1, wherein the capsule (3) has at least one aperture (9) formed in the closed bottom, the aperture being tightly closed by a transparent wall (8) and extending over at least a portion of the surface of said closed bottom.

21. (withdrawn) The device as claimed in claim 20, wherein the transparent wall (8) for tightly closing the aperture (9) is also used as a seal and is securely connected to the capsule (3).

22. (currently amended) The device as claimed in claim 1, wherein the rim of the opening comprises one or more retaining shoulders, wherein the device further ~~comprising~~ comprises a sealing ring attached to the open end of the capsule ~~(3)~~ and connected to the rest of the capsule ~~(3)~~ by a tear-off line ~~that requires~~requiring a predetermined breaking force for separation from the rest of the capsule ~~(3)~~, and wherein the sealing ring ~~providing~~ has a snap engagement with at least one retaining shoulder on the rim of the opening.

23. (withdrawn) The device as claimed in claim 1, wherein the capsule (3) is fitted on the opening of the container (1) and extends beyond the rim of the opening of the container (1) to form a cover (30) shaped like a drinking glass.

24. (withdrawn) The device as claimed in claim 23, wherein the cover (30) is shaped to cause its free edge to substantially abut the outer surface of the container (1).

25. (withdrawn) The device as claimed in claim 23, wherein the cover (30) is and the capsule (3) are an integral piece.

26. (withdrawn) The device as claimed in claim 23, wherein the cover (30) has a shape (34) that is complementary to the shape of the capsule (3), wherein the cover (30) is

connected to the capsule (3) by a fastening process, and wherein the fastening process is force fitting, chemical adhesion, or mechanical adhesion .

27. (withdrawn) The device as claimed in claim 23, wherein the free edge of the cover (30) abuts the outer surface of the container (1), and wherein at least a portion of the container (1) is covered by a label (32) that overlaps both the container (1) and a portion of the cover (30).

28. (withdrawn) The device as claimed in claim 23, wherein the cover is provided with a base forming the base of the drinking glass shape.

29. (withdrawn) The device as claimed in claim 23, wherein the capsule (3) further comprises a sealing end ring (36) extending along the open end of the capsule (3), the sealing end ring (36) being separated from the rest of the capsule (3) by a tear-off line requiring a predetermined breaking force to separate from the rest of the capsule (3), wherein the sealing end ring (36) is designed to engage with an outer radial annular shoulder (35) on the rim of the container (1), wherein the outer radial annular shoulder is situated at such a distance from the edge of rim of the opening that, when the container is closed by the device, the sealing end ring (35) is engaged on the container, and wherein the extension of the capsule (3) forming the cover (30) shaped like a drinking glass extends toward the side of the container (1) opposite to the opening, thereby preventing access to the sealing end ring (35).

30. (withdrawn) The device as claimed in claim 23, wherein the shape of the cover is complementary to, and can be fit over, the side of the container (1) opposite to the opening rather than over the opening, and wherein a label (32) positioned over a container wall lies over at least a portion of the free edge of said cover.

31. (withdrawn) The device as claimed in claim 23, further comprising a second cover (31) associated to the side of the container (1) opposite to the opening, wherein a label (32) is positioned over a container wall, and wherein the label (32) extends over at least a portion of the free edges of both covers.

33. (withdrawn) A process for making a capsule coupled with an extensible diaphragm, the capsule having a closed bottom and an open end, the process comprising the steps of:

- (a) firmly holding the capsule (3) at the closed bottom;
- (b) pushing the capsule (3) into an aperture having an appropriate diameter, an extensible diaphragm (2) being subtended over the aperture;
- (c) stretching the diaphragm (2) with the open end of the capsule (3) upon penetration of the capsule (3) into the aperture, the diaphragm (2) acquiring the shape of a paraboloid of revolution; and
- (d) cutting the diaphragm (2) substantially around, and at a distance from, the perimeter of the open end of the capsule to provide the diaphragm (2) with a diameter larger than the open end of the capsule (3),
wherein the cut edge of the diaphragm (2) shrinks and wraps around the outer surface of the open end of the capsule (3) becoming locked in position.

34. (withdrawn) A process for making a capsule coupled with an extensible diaphragm, the capsule having a closed bottom and an open end, the process comprising the steps of:

- (a) causing a diaphragm disk, whose diameter is greater than the inner diameter of the capsule (3), to be in contact with the closed and suitably perforated base of a hollow cylinder (21), the base having a diameter smaller than the inner diameter of the capsule (3);
- (b) forcing the cylinder into the capsule (3); and
- (c) causing a portion of the diaphragm disk to adhere to a portion of the inner wall of the capsule (3).

35. (withdrawn) The process as claimed in claim 34, wherein the hollow cylinder (21) is replaced by a hollow truncated cone having a smaller base that is suitably perforated.

36. (withdrawn) An apparatus for making a capsule coupled with an extensible diaphragm, the capsule having a closed bottom and an open end, the apparatus comprising a modular cylinder (21) having an outer diameter smaller than the inner diameter of the open end,

said modular cylinder (21) being longitudinally divided into at least two sectors (27), the at least two sectors being hollow and having a closed bottom, wherein the at least two sectors are capable of being inserted into the open end of the capsule (3), thereby pressing the diaphragm into the capsule (3), to spread apart causing a portion of the diaphragm to adhere to the inner wall of the capsule, and to be drawn together again. .

37. (withdrawn) The apparatus as claimed in claim 36, wherein the at least two sectors (27) of the cylinder (21) have an inner cavity that is maintained under vacuum, and wherein each of the at least two sectors has at least one hole in its base communicating with the inner cavity.

38. (withdrawn) The apparatus as claimed in claim 36, further comprising mechanical drive means that accomplish the steps of holding the diaphragm (2), of introducing the diaphragm (2) into the capsule (3), and of pressing and causing adhesion of the portion of the diaphragm (2) that exceeds the diameter of the cylinder (21) against the inner wall of the capsule (3).

39. (withdrawn) A process for making a capsule coupled with an extensible diaphragm, the capsule having a closed bottom and an open end, the process comprising the steps of:

- (a) flaring the open end of the capsule (3) with a conical wedge (14);
- (b) flattening the flared open end with a flat head cylinder (15) to cause the open end to have a flattened edge, while the capsule (3) is held in a correspondingly shaped housing (16);
- (c) laying the diaphragm (2) over the flattened edge and causing it to adhere to the flattened edge; and
- (d) returning the flattened edge to its original position prior to flaring and flattening by a first bend back step, and subsequently by a straightening process, wherein the straightening process is a rolling process by suitable rollers 17 and counter rollers 18 or coaxial compression process of conical sectors 19 that are connected to form a mandrel-shaped tool.

40. (withdrawn) The process as claimed in claim 39, wherein the capsule (3) has a wall, and wherein at least a portion of the wall has a polygonal a cross-section.

41. (withdrawn) The process as claimed in claim 39, wherein at least one of the steps of flaring and flattening the open end of the capsule (3) is obtained by spin molding the material composing the capsule (3).

42. (withdrawn) The process as claimed in claim 41, wherein the capsule is made of metal, and wherein, prior to spin molding, a metal pellet is introduced in an appropriate openable mold and forced by spinning to spread through the entire mold cavity.

43. (withdrawn) The process as claimed in claim 33, wherein the capsule is held at the closed bottom by an electromagnet.